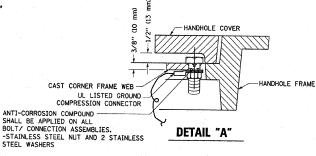


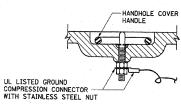
# ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN)

13.75" (0.35 m) DOOR OPENING I.D.O.T. IDENTIFICATION DECALS SHALL BE MOUNTED TO FRONT OF DOORS OF ALL TYPES ELECTRIC 10' (3.0m) MAX UTILITY ENCLOSURE DOOR-ELECTRICAL SERVICE LOCK (ABOVE OR BELOW SEE PANEL DIAGRAM, ABOVE 13.75" (0.35m) GROUND) CONDUIT BUSHINGS - SEE CABINET BASE, BELOW " CHAMFER. CONTINUOUS SEE ELECTRICAL FINISH GRADE -24" (0.60m), - 4' (1.2m) DEPTH SQUARE FOUNDATION PANEL DIAGRAM TO TRAFFIC SIGNAL CONTROLLER 2" (50mm) GALV, CONDUIT 2" (50mm) GALV. CONDUIT \_\_\_\_\_\_\_ **SERVICE INSTALLATION** 3/4" x 10' (20mm x 3.0m) COPPER **GROUND MOUNT** CLAD GROUND ROD (413 mm) 16.25" (0.29 m) 11.50" CABINET BASE 1.44" (37 mm)

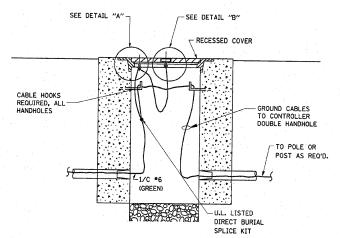
CABINET - BASE BOLT PATTERN

-STAINLESS STEEL NUT AND 2 STAINLESS





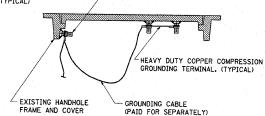
## DETAIL "B"



# HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL)



**EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL** 

NOTES:

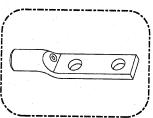
## GROUNDING SYSTEM

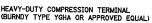
F.A.U. SECTION COUNTY TOTAL SHEE SHEETS NO. 38 RS-4 COOK 36 27 STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT \* F.A.P. 343/ F.A.U. 1273 CONTRACT NO. 60814

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE  $3/4^{\prime\prime}$  DIA.  $\times$  10'-0" (20mm  $\times$  3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.

2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.

- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

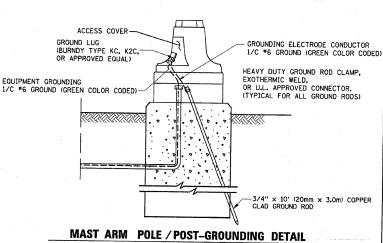






3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

• ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED. GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

DATE: 10/10/2001

DATE VAME SCALE NAME PLOT FILE PLOT USER

> TS05 REVISION DATE: 01/01/02